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## FLINT HILLS NORTH POLE REFINERY SITE ASSESSMENT

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- State is actively engaged

(North Pole, Alaska)

### BACKGROUND:

On May 21, 2010, the Alaska Community Action on Toxics (ACAT) wrote to the U.S. Environmental Protection Agency (EPA) Region 10 petitioning that a Preliminary Assessment (PA) be conducted at the Flint Hills Resources' North Pole Refinery.

ACAT's concerns were potential impacts to North Pole residents' drinking water sources and public health from past activities as well as releases of contaminants to the environment at the refinery, specifically the release of sulfolane.

EPA completed the PA in June of 2012. At this time, EPA is still evaluating the information contained within the report and plans to consult with the Alaska Department of Environmental Conservation (ADEC) to determine the best approach to further investigate and remediate the site, as there has been substantial work completed already.

Throughout the PA process EPA engaged in conversations with ADEC to further understand groundwater contamination issues related to the refinery as well as their current actions and future plans to investigate and address sulfolane contamination within North Pole groundwater.

Since the discovery of sulfolane in North Pole drinking water in 2009, ADEC has made significant progress in delineating the extent of the sulfolane plume, minimizing exposure to sulfolane contaminated groundwater, and is working towards determining potential actions for addressing and remediating contamination related to the site. In addition, ADEC has been working to develop appropriate public health action levels. Key milestones include:

- Extensive site investigation beginning in Oct. 2009 and ongoing,
- Bottled water provided immediately until permanent solution found.
- ADEC Interim Cleanup Level lowered to 25 ug/L, in February 2010, based on Health Department's preliminary evaluation.
- A technical project team of experts formed by ADEC in March 2010 to oversee investigation and cleanup, to which EPA has been involved with on various levels,
- Interim cleanup plan approved by ADEC in September 2010 to increase robustness of the process.
- New analytical techniques developed to detect sulfolane in vegetables, water, and soil at lower levels.
- A garden study completed in 2010, which found sulfolane in garden vegetables, particularly leafy greens
- Permanent drinking water options developed in 2010 and implemented in 2011. Residents have also been offered a garden watering tank.
- The National Toxicity Program has accepted ADEC's nomination of sulfolane for further research in December 2011.
- EPA toxicity value (PPRTV) released in January 2012 which allowed ADEC to finalize a site-specific cleanup level for sulfolane at 14 ug/L, pending new toxicity data that may eventually become available from the NTP efforts described above.

- 2012 treatability studies in concert with research at University of Alaska Fairbanks and University of Oklahoma indicate enhanced biological and/or chemical degradation may be effective even at the cold water temperatures.
- January 2013, ADEC requested assistance from the EPA Ada Laboratory to better understand the degradation of sulfolane in sub-surface aquifer and apply that knowledge to a proposed clean-up action.
- February 5, 2013: ADEC Program Manager (Steve Bainbridge) and site manager will be visiting ECL to update us on the current status of cleanup plans.

**QUESTION:** What is EPA doing to investigate the Flint Hills North Pole Refinery Site?

**ANSWER:**

- EPA responded to ACAT's petition and completed the Preliminary Assessment in June 2012.
- At this time EPA is evaluating the information contained within the Preliminary Assessment report and will determine if the site threatens human health and the environment and needs additional response under the Superfund program.
- If additional response is needed under the Superfund program, EPA will consult with the Alaska Department of Environmental Conservation (ADEC) to determine the best approach to further investigate and remediate the site, as ADEC has completed substantial work at the site already.